UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

R-10

REPLY TO: 2020 Planning

October 7, 1969

SUBJECT: Stream survey report from Ketchikan District

TO: Forest Supervisor, South Tongass N.F.

Thank you for the stream survey data for Dog Salmon, Aiken, and Ratz Creeks. Such evaluations are just as important as the initial construction of such projects.

With regard to Aiken Creek, dolly varden must be able to routinely ascend the falls each year, because this species does not usually remain in a stream over the summer where there is no access to a lake. Ordinarily, mature dolly varden leave a lake in the spring, enter saltwater, where they remain for awhile, then enter spawning streams in the fall. They usually then overwinter in a lake. It is possible that additional coho salmon entered the system after the date of the survey, September 9. The rearing area and not available spawning area is the main factor limiting production of coho salmon above the fall. In estimating a coho benefit cost ratio for the area above the fall, the rearing area should be used. Possibly coho do not have difficulty ascending the fall, and the system is supporting all the coho it can without additional improvement. Estimation of a benefit cost ratio for installation of steeppasses to allow pinks to ascend the fall would be based upon available spawning area as outlined in the beneift cost booklet.

The observation of 140 pink salmon above the fall in Dog Salmon Creek certainly indicates that we may now have a foundation for an upstream run. Coho salmon may go all the way into the small lake and its inlets, if they can make it over all of the falls. According to a logging operator (I think it was Sinclair), who was in the area a few years ago, a small sockeye salmon run went all the way to the lake. Possibly the best way to get the largest number of pinks and chums over the fall into the upstream area would be to curtail fishing intensity in Polk Inlet and Skowl Arm. Perhaps you could consult with Carl Rosier regarding this possibility.

We agree with Don Swaney regarding a benefit cost analysis on laddering the fall in upper Ratz Creek.

William Sheridan
Fishery Biologist

cc: Roy Rickey, ADF&G
Sheridan

BSheridan:pm

Aiken Creek (Kasaan District) is included under completed projects because one log jam was removed even though the log extending across the fall is still in place. There were about 1,000-2,000 chum salmon and several hundred pink salmon below the fall and 200 coho salmon and 1 pink salmon female above the fall. At the water level at the time of our visit, the log extending across the fall did not appear to be a barrier to upstream migration of coho salmon (it is doubtful if many pink and chum will ever ascend the fall, unless it is modified, or a steeppass is installed). On previous visits, when the water level was higher, water boiling under the log appeared to form a velocity barrier.

Recommendations

1. Remove log extending across fall.

2. Remove selected log jams in stream below fall (between fall and tidewater).

3. Inventory (as low priority project for the future) laddering fall for ascent of pink salmon into upstream spawning area.

4. Enumerate and determine distribution of various species of salmon in stream from tidewater to one mile above fall in mid-September 1968.

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Kasaan Ranger District

2630 Habitat

September 10, 1969

Salmon Stream monitoring of Dog Salmon Steep pass

Files

On September 3, 1969, Gary McCoy and myself monitored the steep pass on Dog Salmon Creek in Polk Inlet.

The water level on this date was approximately three inches higher than on the August 28th inspection. The concentration of pinks was about the same, the chums were absent, and silvers were just beginning to run. The bay appeared full of silvers.

The steep pass was a greater attraction to the salmon with the additional water. Due to the foamy water and air bubbles from the upper falls, it was difficult to see the salmon go up the steep pass, but five pinks were observed for certain. Salmon couldn't begin to climb the falls next to the steep pass with the additional water flow.

In walking the stream to the forks, 140 pinks and 2 silvers were tallied. There could have easily been more in the deep holes where visibility was poor.

Daniel H. Swaney
DANIEL H. SWANEY
Forester

cc: SO

Forest Supervisor, South Tongass N.F. 2620

John B. Smith, Assistant Regional Forester September 23, 1964

Planning

On September 12, 1964, Sheridan examined Aiken Cove Creek with Bill Carson, Kasaan District.

The fall, one-quarter mile above tidewater, appeared to be impassable at the time because low discharge (7-8 cfs) caused water to spread in a thin sheet over the right side of the bedrock channel. On a previous visit this fall also appeared impassable to pink and chum salmon because of high discharge (150 cfs). The presence of hundreds of coho fry of the year, both above and below the fall, is evidence that this species negotiates the barrier and occupies upper spawning grounds.

No adult salmon were observed above the fall--12 pinks, 4 chum, and 1 coho were observed below.

There is a minimum of 40,000 square feet of potential spawning area above the barrier. The streambed is composed of smaller rocks (1-5 inches in diameter) and is of better quality than the spawning area below the barrier (rocks 2-8 inches in diameter).

We are not thoroughly convinced that this barrier is impassable to pink and chum salmon at all water levels. Therefore, before further consideration is given to habitat improvement in the Aiken Cove stream, we need to know (1) if pink and chum salmon ascend the fall this season, and (2) how many salmon are spawning in the stream.

It would be possible to ladder the fall with 4-5 sections of steeppass. It may also be possible to modify the barrier with powder so that pink and chum salmon can ascend, if they do not already do so.

Background information on the Aiken Cove Stream is given in the enclosed South Tongass Reconnaissance report.

Enclosure

E.L.Sheridan/mtp

Recommendations

1. Take out log, which has lodged in the right side of the fall.

2. Observe passage of salmon after log has been removed. If salmon do not then pass over fall, an expenditure of $12,000 to $15,000 will be required to install 70 lineal feet of aluminum steeppass. Because of the relatively small amount of spawning area above the fall (40,000 square feet), such an expenditure does not appear to be justified at present.

3. If removal of log does not permit passage of salmon, an alternative is to create pools in the rock fall by blasting. Such rock shaping must be done carefully or a worse barrier may be the result.

Since the first visits to Aiken Creek in 1964 and 1965, the District has removed the log from the top of the fall and cleared some log debris jams from the channel between the fall and tidewater. Several evaluation visits have also been made. Coho salmon apparently ascend the fall with no great difficulty. A very few pinks (all females) have been observed above the fall as have hundreds of Dolly Varden. District is working on a benefit/cost analysis of laddering the fall for pink salmon.

Forest Supervisor, South Tongass N.F. 2620

John B. Smith, Assistant Regional Forester September 23, 1964

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Enclosure

E.L.Sheridan/mtn

P. of U.S.

8/25/65
Elemer
w/USFS

Aiken Cove Creek (1)
Maira Sound
P.W. Island

Salmon upstream block appx 1/4 mi. above hi-tide.

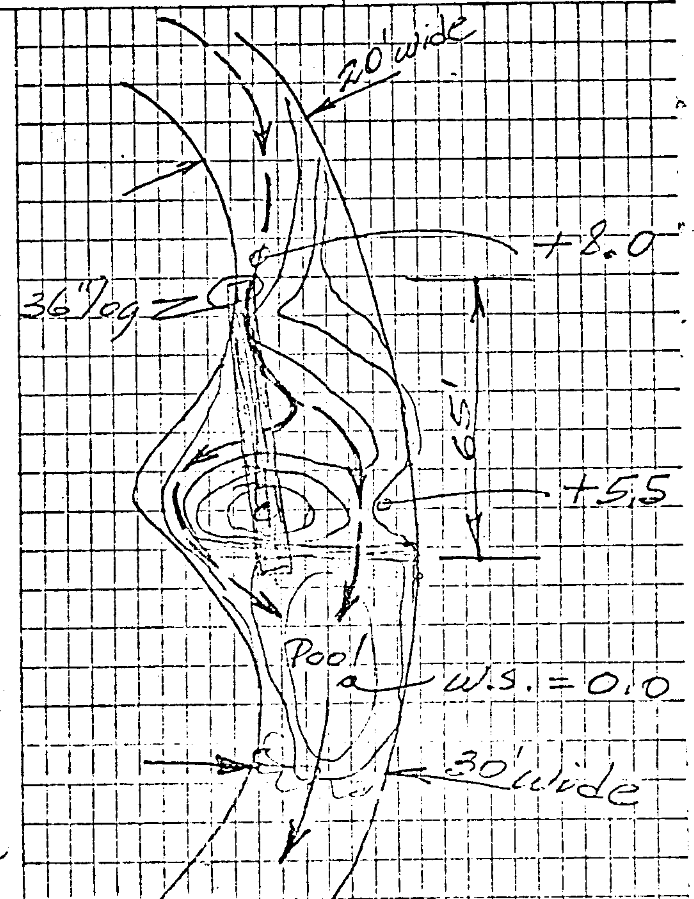
Granitic rock intruded dike.

Estimated flow > 2 cfs. this date — Some reaches of creek flow is all sub-terranean. Many Coho fry above and below block. Creek dry at mouth. Dead humpies in saltwater. Some pinks jumping in tidewater.

High stage flow has been observed at < 150 cfs.

— more —

Aiken Cove Cr. (2)



— more —

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Aiken Cove Cr. (5)

appreciable funds into question.

(3) If hi stage development with fishway determined not to be economically prudent, then creating some pools in the rock stream bed as a means of passing migrants up at all but high stages as worthy of consideration. Any rock shaping must be very carefully done or might create worse block than now exists.

Have returns in file